

Our survey suggests that a substantial number of pediatricians are not supporting working women with children appropriately. Because 44 percent of office visits by children under 15 years of age are to pediatricians (15), they may be a source of support for mothers who work outside the home. It would seem worthwhile for maternal and child health undergraduate and postgraduate educational programs as well as service programs to focus more attention on and to provide more practical support for working mothers, their children, and health workers providing care to these groups.

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Users of Reproductive Health Clinic Services in a School Pregnancy Prevention Program

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Synopsis.....

Although the potential of school-based programs in the prevention of adolescent pregnancy is well

recognized, few have been evaluated. This paper describes the use of a reproductive health care clinic associated with a school pregnancy prevention program which had demonstrated success. The program operated in one junior and one senior high school in a large city during the 3 school years from 1981 to 1984. Three facets of the 818 users of the program clinic are explored: (a) who enrolled in the clinic, (b) why they enrolled and what contraceptive methods they received, and (c) their continuation with the clinic.

Chi-square analysis and Student's t-tests were used to test for significant differences between the two school and sex groups. Life table and regression techniques were employed to examine clinic continuation.

The main findings are (a) teens of both sexes used the clinic, and junior high males used it in surprisingly large numbers; (b) there were no major school or sex differences in the characteristics of those who enrolled; (c) most students enrolled to obtain a contraceptive method; (d) although many females served by the clinic had previously used another family planning clinic, the

majority of them had unmet needs; (e) the rate of clinic continuation was high; and (f) certain factors contributed to clinic continuation. These findings suggest that a clinic in a school-linked setting can

successfully attract students to use its services and it may offer certain advantages for reaching sexually active teens in search of contraceptive protection.

IN AN ATTEMPT TO MEET the health care needs of adolescents, and the specific needs of some teenagers for reproductive health care, various models of medical programs and clinics are being introduced into many schools in the United States. Although they remain somewhat controversial, their potential in the prevention of adolescent pregnancy is well recognized. However, before the program which provided the setting for this study, no such school-based or school-linked interventions had been subjected to strict evaluation; baseline data have not been available, nor have comparison groups been established to assess effectiveness.

For many years, the best known program for which some limited results were reported was one implemented almost 20 years ago—the Saint Paul Maternal and Infant Care Project (1,2). In this program, clinics were operated within the schools, but students had to go to a nearby hospital to receive contraception. The providers reported a decrease in the live birth rate and a high contraceptive continuation rate among females (3).

In this paper we will attempt to augment the limited information currently available about the use of school-linked clinic services. It follows upon the evaluation of a 3-year sex education and clinic program which used baseline data and control populations to demonstrate positive outcomes. These included significant reductions in pregnancy rates, significant improvement in clinic attendance and in the use of effective contraception and, among a limited group, a postponement of first coitus (4). This report, part of a larger evaluation of the program, will describe the use of the service component of the program. It will use clinic data to focus on the subset of students who became clinic enrollees. It addresses three facets of clinic use: (a) who enrolled in the clinic, (b) why they enrolled and what contraceptive methods they received, and (c) their continuation with the clinic. Differences between teens by age and sex will be assessed.

These comparisons are important because of an increasing concern about younger teens and the scarcity of information about the use of family planning clinics by adolescent males. Findings from this school-linked clinic population will be

used to answer some questions about serving adolescents in family planning settings. These questions relate to the success of the program in reaching its target population and its success in serving those who did enroll.

The pregnancy prevention program served one junior and one senior high school. As a combined service and research project, it sought both to prevent adolescent pregnancy and to evaluate that effort. All students who attended the two schools, which were chosen because of their proximity to the hospital involved in this project, were black. The program was in the schools from November 1981 to June 1984. The students were told of the program and provided with general sex education lectures in their classrooms by the project providers assigned to each school, a social worker and a nurse. The program clinic, located in a storefront facility across the street from the senior high school and a few blocks from the junior high school, opened in January 1982 and ended officially in June 1984. It was staffed by the same providers who were in the schools.

Any student who attended either school was eligible to receive clinic services while he or she was a student in either school. Although only education and counseling were given in the schools, students could come to the clinic for these services and a full range of reproductive health services as well; these included contraception, diagnosis and treatment of sexually transmitted diseases, and pregnancy tests and referrals for care. Since this was not a comprehensive health service facility, clinic enrollees who presented with other medical problems or who had other such problems diagnosed were referred for appropriate medical services. The clinic was open five afternoons a week for most of the 2 1/2 years of the program, and all services were free. More detailed descriptions of the program have been published (4-6).

Methods

Information was collected about the students who enrolled at the clinic, and it is presented for the four sex-school groups, that is, females and

males at the senior and junior high schools. These four groups will be referred to as senior females, senior males, junior females, and junior males. An enrollee was defined as a student from either school who received a specific service at the program clinic from January 1982 through June 1984; the date of enrollment is the first day that this event occurred. Students from the two schools and others were allowed to walk in at any time during clinic hours to look around, see a movie, join a discussion group, play a game, or read; however, students who visited only for these reasons were not considered clinic enrollees.

Chi-square tests for categorical variables and *t*-tests for continuous variables were used to test for significant differences between sex and school groups, that is: (a) senior and junior females, (b) senior and junior males, (c) senior females and males, and (d) junior females and males. Life tables and multiple regression were used to examine clinic continuation. The significance level in all analyses was 0.05.

Enrollees were grouped by sex and school because these factors are important in examining behavior related to reproductive health care and family planning services. School was used instead of age for two reasons:

1. Use of school requires a less arbitrary cut-off than age and can serve as a proxy for it; and
2. There were differences between the schools in the student bodies and in the ways the program operated.

The junior high school serves students from its immediate neighborhood, which is within some of the lowest income census tracts in Baltimore. The senior high functions as a community school and as a magnet school; it serves students from a broader geographic area. There were changes in project personnel and their precise operations within the schools over the course of the program; however, these changes will not be addressed in this paper. More information about the schools and the characteristics of the students has been published (5,6).

Results

Clinic enrollees. A total of 818 students enrolled in the clinic. Their distribution by sex for each school was striking: 86.6 percent of the senior enrollees were female, and 56.2 percent of the junior enrollees were male. Table 1 shows enrollees as a percentage of their school's student body and as a

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percentage of the student body that was sexually active. Only 12.9 percent of the senior males enrolled in the clinic; 39.2 percent of the senior females also did. Smaller percentages of the junior high students enrolled—19.4 percent of the males and 16.9 percent of the females. The percentages of the sexually active who enrolled were larger for all four groups, especially for the females. This was due to a much higher percentage of males than females who were sexually active. This was so especially on the junior high school level where the result was a higher percentage of sexually active female enrollees than sexually active male enrollees. The seniors were about 2 years older than the juniors.

Other characteristics of the enrollees are shown in table 1. Senior girls were more likely than boys to be in the lower grades of their schools; the opposite was true for the junior students. The distributions of the seniors among the 4 grades was significantly different by sex.

All registrants from July 1982 through June 1984 were asked if they had ever visited any family planning clinic and if they had visited the program clinic before their enrollment visit. As expected, higher percentages of females than males had been to any family planning clinic. Senior females were the most likely to have done so. The only statistically significant difference in percentages was between the senior females and males. Overall, 34.7 percent of the registrants had visited the program clinic itself (as opposed to visiting *any* clinic) before they became enrollees. Junior boys were the most likely to have visited prior to registration, but none of these differences was statistically significant.

There was little difference by school in the percentages of female enrollees who were sexually active. Overall, 15.0 percent of enrollees were virgins at the time of enrollment. Senior females were more than twice as likely as junior females to have had at least one pregnancy outcome before

Table 1. Percentage of student body, percentage of student body that was sexually active, mean age at first visit, and percentage of enrollees with selected characteristics, by sex and school

Characteristic	Females		Males		Significant at .05 level ¹
	Senior (N = 428)	Junior (N = 142)	Senior (N = 66)	Junior (N = 182)	
Percent of student body.....	39.2	16.9	12.9	19.4	
Percent of student body that was sexually active	50.2	28.8	13.9	21.7	
Mean age at first visit:					
Number of respondents	426	142	66	182	
Mean age (years).....	16.4	14.5	16.6	14.4	A,B
Distribution of enrollees by grade:					
Number of respondents	428	142	66	182	
Percent distribution:					
Seventh	35.9	...	48.9	
Eighth.....	...	38.7	...	32.4	
Ninth.....	10.3	25.4	10.6	18.7	C
Tenth.....	37.1	...	28.8	...	
Eleventh.....	33.9	...	25.8	...	
Twelfth.....	18.7	...	34.8	...	
Had previous family planning visit: ²					
Number of respondents	284	86	58	125	
Percent	37.3	26.7	17.2	16.0	C
Had visited the program clinic before enrolling: ²					
Number of respondents	285	86	57	126	
Percent	33.7	33.7	29.8	39.7	
Had intercourse:					
Number of respondents	421	132	U	U	
Percent	86.2	81.1	U	U	
Had at least 1 pregnancy outcome:					
Number of respondents	411	131	NA	NA	
Percent	13.1	5.3	NA	NA	A

¹ A = senior females versus junior females, B = senior males versus junior males, C = senior females versus senior males.

² Only enrollees from July 1982 on.
NOTE: U = unavailable, NA = not applicable.

their first visit to the program clinic. (For this analysis young women who were pregnant for the first time at their enrollment visit were not considered ever pregnant.) The difference was significant, but not surprising, because the difference in age implies different exposure to pregnancy.

First clinic visit. Distributions of various characteristics in relation to the students' first clinic visit are shown in table 2. There was an average delay of at least 6 months in coming to the program clinic, once eligible, in all four sex-school groups. The senior males postponed attendance for a significantly longer interval, 10.5 months, than either senior girls or junior boys.

The 2 1/2 years that the clinic was open can be divided into three periods. Each sex-school group exhibited a different pattern of entry over time. The largest percentage of males and the smallest percentage of females enrolled during the third program year compared with the first 2 years. Enrollment was essentially level for the junior high students for 2 of the 3 years, but it differed in all

3 years for the senior high students. All four comparisons were significantly different.

The clinic providers assigned each visit a "presenting reason," defined as the reason the patient gave for coming to the clinic. This reason was not necessarily the same one that the provider thought motivated the visit nor the reason the provider told the student to come. There are four presenting reasons: to obtain a contraceptive method, to request a pregnancy test (females only), to check a medical complaint (this includes STD diagnosis), and "other," which includes visits for counseling only, education only, and miscellaneous other reasons. For all four sex-school groups, the desire to obtain a contraceptive method was the predominant reason for the first clinic visit. There was little difference between the two groups of females in the distribution of presenting reasons. However, the junior boys were more likely to come to the clinic for contraception and the senior boys were more likely to come for a medical reason. If the medical and other categories are combined, the difference is significant.

More than 90 percent of the males from both schools received condoms or condoms and foam at their first visit. The remainder left with no method. The contraceptive methods given to females at the clinic were pills, diaphragms, and condoms, or foam and condoms. (Although foam and condoms were given as both primary and backup methods, in this report, they are counted only when they were given as primary methods.) Senior females were more likely to receive the pill at their first clinic visit than any other or no method. Junior females were about as likely to receive the pill as they were to receive nonprescription barrier methods. Only a small proportion from each school received the diaphragm, and about one-quarter of the females received no method at the first visit. The contraceptive methods given to females differed significantly by school. The methods given are not entirely indicative of what the young women requested; there may have been medical contraindications or aspects of their sexual histories that dictated which method they should receive.

Since a primary goal of this program was to prevent pregnancy by providing contraceptive services, it was of interest to explore differences in characteristics of those who came for contraceptive services versus those who came for some other reason. Statistical comparisons were made between the two presenting reason groups for each sex-school group, and sex and school comparisons were made for those who had contraception as their presenting reason. Age and previous visit to the program clinic were examined for both sexes; the other variables were examined only for females.

For all sex-school groups, the mean age at first visit for those who came to the clinic for contraception was lower than the mean age of those who came for another reason (table 3). Although all the age differences by presenting reason were less than a year, those for the senior females and males were significant.

There were no significant differences in the percentages who visited the program clinic before their enrollment visits according to the presenting reason, nor for contraceptive presenting reason by school or sex. However, the junior males who came to the clinic for contraception were more likely to have been there before compared with the junior females and the senior males.

Table 4 shows that the females who presented for contraception at the first visit were less likely to have had a previous visit to any family planning

Table 2. Mean delay before enrollees' first clinic visit and percent distribution of selected first visit variables, by sex and school

Variables	Females		Males		Significant at .05 level ¹
	Senior (N = 428)	Junior (N = 142)	Senior (N = 66)	Junior (N = 182)	
Mean delay (in months) from initial eligibility to first visit ²	7.2	6.6	10.5	6.5	B,C
School year of first visit:					
Jan.-June '82	32.5	38.7	10.6	28.0	
July '82-June '83	43.7	31.0	37.9	25.8	A,B,C,D
July '83-June '84	23.8	30.3	51.5	46.2	
Presenting reason:					
Contraception	74.5	73.2	81.8	94.0	
Pregnancy test ³	10.3	12.7	NA	NA	B ⁴
Medical	10.0	7.7	16.7	3.3	
Other	5.1	6.3	1.5	2.7	
Contraceptive method received:					
Oral contraceptive ⁵	44.4	33.1	NA	NA	
Diaphragm ⁵	8.2	5.6	NA	NA	A,B
Condom alone or with foam	22.7	36.6	90.9	98.9	
None	24.8	24.6	9.1	1.1	

¹ A = senior females versus junior females, B = senior males versus junior males, C = senior females versus senior males, D = junior females versus junior males.

² Numbers of respondents on which mean delay is based are senior females 425, junior females 141, senior males 65, and junior males 182.

³ Reason not valid for males.

⁴ Significant difference when medical and other are combined into 1 group.

⁵ Method given to females only.

NOTE: NA = not applicable.

clinic than were those who came for other reasons. The difference was significant for senior females. The senior females who came for a contraceptive reason were more likely than their younger counterparts to have had a previous family planning visit, but the difference was not significant.

There were no significant differences in the percentages who were sexually active or who had had a pregnancy outcome by presenting reason for either the senior or junior females. The difference by school in the percentage of females who were sexually active among those who had a contraceptive presenting reason was not significant either. However, senior females who presented for contraception were significantly more likely to have had a pregnancy outcome than junior females. This is probably a function of the difference in their current ages.

One other facet of the first visit was examined: the relationship between receiving a method at the first visit and previous contraceptive use. This relation could only be explored for those sexually active females for whom both pieces of informa-

Table 3. Mean age at first visit and percentage who had visited the program clinic before enrolling, by presenting reason for first clinic visit, sex, and school

Variable and reason for visit	Senior females		Junior females		Senior males		Junior males	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Mean age at first visit:								
Contraception.....	319	¹ 16.3	104	14.5	54	16.4	171	14.4
Other.....	107	16.6	38	14.6	12	¹ 17.2	11	14.9
Percent who had visited program clinic before enrolling: ²								
Contraception.....	210	31.9	66	31.8	46	28.3	119	42.0
Other.....	75	38.7	20	40.0	11	36.4	7	0.0

¹ Contraception versus other was significant at the .05 level.

² Only enrollees from July 1982 on.

Table 4. Background experience of females, by presenting reason for first clinic visit and school

Reason for first clinic visit	Had previous family planning visit ¹		Had intercourse		Had at least 1 pregnancy outcome	
	Number	Percent	Number	Percent	Number	Percent
<i>Senior females</i>						
Contraception.....	211	33.6	317	85.8	311	³ 12.2
Other.....	73	² 47.9	104	87.5	100	16.0
<i>Junior females</i>						
Contraception.....	66	22.7	96	83.3	95	4.2
Other.....	20	40.0	36	75.0	36	8.3

¹ Only enrollees from July 1982 on.

² Contraception versus other was significant at the .05 level.

³ Senior versus junior females for contraception as their presenting reasons was significant at the .05 level.

tion were collected at the first visit (62 percent of the seniors and 56 percent of the juniors). Two comparisons were made. Table 5 shows the percentages of enrollees who had ever used the specific methods given to them at their first visits as well as the percentages who had ever used *any* prepared method (a method that must be obtained prior to the coital event at which it is used). Prepared methods include pill, IUD, diaphragm, condom, foam, and condom and foam. Most enrollees who received the pill or the diaphragm had never used the respective method before. This pattern is also true of foam and condom among junior females. Most senior females who received foam and condoms were likely to have used them before. Most of the senior females had used at least one prepared method: fewer junior females had done so. The differences between the senior and junior females were significant for the pill and the nonprescription barrier methods.

Clinic continuation. In the third part of this analysis clinic continuation and factors related to it were explored. Life tables were used to examine two probabilities of revisits over time. The first

was the probability of a second visit; all clinic enrollees were included in this analysis. Time zero represented their enrollment visit, and they were exited from the table in one of two ways. If they had a second visit, they were terminated at the time of that visit. If they had only one visit, they were withdrawn during the month they became ineligible to use the services (that is, when they were no longer students at either program school). The other life table examined the probability of having a third visit, given a second visit; all clinic enrollees who had at least two visits were included in this table. Time zero represented their second visit. If they had at least three visits, they were terminated at the time of their third visit. If they had only two clinic visits, they were withdrawn when they were no longer eligible to use the services.

As shown in table 6, the probability of a second visit for females was high and, with a caution about small numbers, was more than 90 percent for both senior and junior females within 18 months after the first visit. The probability of a second visit in that period for males, while much lower than for females, was nonetheless greater

Table 5. Previous use of specific contraceptive method received and previous use of any prepared method¹, by sexually active females who received a method at first clinic visit, by school and method

Method	Senior females	Junior females	P value
<i>Pill</i>			
Number receiving method	155	36	
Percent who had used it previously	36.1	16.7	≤ .05
Percent who had ever used any prepared method	78.1	55.6	≤ .05
<i>Diaphragm</i>			
Number receiving method	32	6	
Percent who had used it previously	9.4	0.0	> .05
Percent who had ever used any prepared method	68.8	50.0	> .05
<i>Condom alone or with foam</i>			
Number receiving method	38	18	
Percent who had used it previously	73.7	33.3	≤ .05
Percent who had ever used any prepared method	76.3	44.4	≤ .05

¹ Prepared contraceptive methods include pill, IUD, diaphragm, condom, foam, and condom and foam.

than 50 percent for males from both schools. The probability of a third visit, given a second visit, was generally even higher than the probability of a second visit.

Ordinary least squares multiple regression was used to explore the general question: what independent factors are related to clinic continuation? Five indicators of continuation previously used by Shea and co-authors (7) were used in this analysis. The indicators are shown by sex and school in table 7. Four measures involve the number of enrollees' visits: whether they had more than one visit, their total number of visits, and the number of visits within 3 months and 6 months of the first visit. The fifth measure is the interval between the first and second visit. In general, all measures conform to the same ordering; senior females have the most visits and the shortest interval, followed by junior females, junior males, and senior males. All but 3 of the 16 sex-school comparisons for the 4 number-of-visit indicators were significant. The only significant sex-school difference for the interval between first and second visits was between the female and the male senior students.

Regression was used to take advantage of the continuous measures of clinic continuation and to control for the interval between the enrollment visit and termination of clinic eligibility. A total of 140 regression models were run, 1 for each sex-school group with each measure of clinic

Table 6. Cumulative probabilities of clinic revisits, by sex and school

Interval before subsequent visit	Senior females	Junior females	Senior males	Junior males
<i>Probability of a second visit (given a first visit) by beginning of interval</i>				
Initial number of enrollees	427	142	66	181
Interval before second visit:				
3 months	0.75	0.66	0.22	0.39
6 months	0.82	0.74	0.36	0.48
12 months	0.88	0.81	0.52	0.62
18 months	0.93	0.94	0.52	0.67
<i>Probability of a third visit (given a second visit) by beginning of interval</i>				
Initial number of enrollees	360	104	24	91
Interval before third visit:				
3 months	0.79	0.66	0.27	0.47
6 months	0.86	0.75	0.56	0.59
12 months	0.95	0.86	0.67	0.71
18 months	0.96	0.86	0.67	0.77

¹ Number is less than or equal to 10.

continuation as the dependent variable and 2 independent variables, the control interval and one of these factors: age, grade, presenting reason, contraceptive method received, ever visited any family planning clinic, ever visited the program clinic, ever sexually active or ever had a pregnancy outcome (the latter 2 variables for females only). Each variable refers to status at the enrollment visit. For females, presenting reason and contraceptive method received were each entered into the regression as three dichotomous variables with other reason and no method, respectively, the reference categories. Presenting reason and contraception for the males were each a dichotomous variable with presenting reason coded as contraception '1' or other '0' and method given coded as method '1' or no method '0'. As before, analyses containing the variables ever visited any family planning clinic and ever visited the program clinic were restricted to the enrollees who had a first visit from July 1982 on. These two variables and sexual activity and pregnancy were coded yes '1' and no '0'. Twenty-seven regression models were significant (table 8). Only those factors that were significantly related to three or more measures of clinic continuation for any one sex-school group will be discussed.

For the senior females, the method received was related to all dependent variables except the number of visits in 6 months. Those who received the

Table 7. Indicators of clinic continuation, by sex and school

Indicators of clinic continuation	Senior females	Junior females	Senior males	Junior males	Significant at .05 level ¹
Number of students	428	142	66	182	
Percent with more than 1 visit	84.3	73.2	36.4	50.5	A,B,C,D
Total visits:					
Mean number	6.9	4.7	2.3	2.3	A,C,D
Range	1,41	1,52	1,32	1,29	
Visits in first 3 months:					
Mean number	2.5	2.2	1.3	1.6	B,C,D
Range	1,13	1,10	1,4	1,6	
Visits in first 6 months:					
Mean number	3.6	2.8	1.6	1.9	A,C,D
Range	1,23	1,14	1,9	1,14	
Number of students with at least 2 visits	361	104	24	92	
Months between first and second visits:					
Mean	1.8	2.0	3.6	2.8	C
Range	0,22	0,17	0,11	0,20	

¹ A = senior females versus junior females, B = senior males versus junior males, C = senior females versus senior males, D = junior females versus junior males.

Among all male students in the schools during this program, attendance at any birth control clinic increased. Thus, both the clinic and the school data suggest that young men want and need services. They may seek these services in an environment such as that provided by the program clinic, where they feel comfortable enough to ask their questions and request services.

pill or diaphragm were likelier to have more than one visit and a shorter interval than those who got no method; the opposite relationship existed for those who got condoms or foam and condoms. Those who received any method had more total visits, but fewer visits in 3 months, than those who got no method. Sexual activity was positively and significantly related to the four number-of-visit dependent variables and negatively related to the interval between first and next visit. Total number of visits and number of visits in 3 and 6 months were positively and significantly related to ever visiting any family planning clinic.

Older junior females were likelier to have more than one visit, more total visits, and more visits in 6 months than those younger. Method received by

the junior females was significantly related to all four number-of-visit dependent variables. The junior females who got the pill or diaphragm, compared with those who got no method, were likelier to have more than one visit, more total visits, and more visits in 6 months; those who received condoms or foam and condoms were less likely to do so. However, those who got the pill or nonprescription barrier methods had fewer visits in 3 months, and those who received the diaphragm had more visits.

Senior males who received a method had fewer total visits, fewer visits in 6 months, and a longer interval between first and second visit than those who did not receive a method. However, these results should be interpreted with caution as only a few senior males did not receive a method at their enrollment visit.

Conclusion

Among the questions which will be answered in the evaluation of this pregnancy prevention project are questions of how this program achieved its pregnancy prevention outcomes. Our paper focuses on clinic use by students in the program schools. To summarize the findings, answers to some questions about serving adolescents in family planning settings will be discussed.

First, will male students use a family planning clinic if one is accessible to them? Although many providers find young men hard to reach, the answer from this study is clearly yes. Although

only 19 percent of junior males enrolled in the clinic, more junior males than females enrolled. Some senior boys used the clinic, but they seemed to need a longer period to feel comfortable about attending the clinic. This observation is supported by two findings: they had the longest interval between eligibility and first visit, and more than 50 percent had their first visit in the third year of the program. Among all male students in the schools during this program, attendance at any birth control clinic increased (4). Thus, both the clinic and the school data suggest that young men want and need services. They may seek these services in an environment such as that provided by the program clinic, where they feel comfortable enough to ask their questions and request services. Clearly, this atmosphere is a necessary but not sufficient criterion to serve male clientele.

Second, did female and male, younger and older, clinic enrollees differ in their characteristics or in what they wanted from the clinic? The answer appears to be no. Most of the comparisons of enrollee characteristics by sex and by school were not significant. The similarity in the percentage of sexually active females from the two schools should especially be noted. Overall, 15.0 percent of the females enrolled while they were virgins. This percentage is similar to that found in other studies of teens attending a clinic (8,9).

Although there were significant differences in the delay before first clinic visit and the year of program entrance, the primary reason for initial enrollment—to obtain a contraceptive method—was the same for all sex-school groups. It could be hypothesized that the high proportions requesting contraception at enrollment were only attributable to the fact that registration was required in order to obtain contraception. However, the evidence suggests that it was, in large measure, contraception that brought these young people into the clinic. For the majority of enrollees, their enrollment visits were their first visits to the clinic. They had not previously taken advantage of the many different group education services available.

There were significant differences in the contraceptive methods that senior and junior females received but most enrollees, male and female, left the clinic that first visit with a contraceptive method. While the staff was able to offer and provide all enrollees with the same services once they came to the facility, they were not able to enroll all segments of the schools' population equally. For example, 39 percent of the senior females enrolled compared with only 13 percent of

Table 8. Significant regression results, by sex, school, and dependent variable

Dependent variable	Significant independent variables for— ¹			
	Senior females	Junior females	Senior males	Junior males
Probability of more than 1 visit	MR, SA	A, MR		
Total visits	MR, SA, FP	A, MR	MR	
Total visits in 3 months	PR, MR, SA, FP	MR		A
Total visits in 6 months	SA, FP, P	A, MR	MR	
Interval between first and second visits	MR, SA		PR, MR	FP

¹ Independent variables were A = age, PR = presenting reason, MR = method received, FP = ever visited any family planning clinic, SA = sexual activity, and P = pregnancy history.

the senior males. Research using aggregate school data will focus on the characteristics of those who did and did not come into the clinic to understand better these differentials.

Third, did the clinic just substitute for another clinic, presumably because it was free and close to school, or did it serve a new segment of those in need? The clinic did both. More than 60 percent of the females who enrolled in the second and third years had not previously been to a family planning clinic. Those young women who presented for contraception at their first visits were less likely to have been to another clinic previously compared with those who first came for another reason. These differences were not due to differences in the percentages sexually active or the lengths of time they were sexually active before the enrollment clinic visit. In addition, with one exception, senior and junior girls who received methods at their first visits were less likely than not to have used those methods before, although among both groups, larger percentages had used prepared methods. These data suggest that a substantial percentage of the females served by the clinic were in need of contraceptive services, and were not just replacing another clinic with this one.

Finally, what can be said about clinic continuation? The probabilities of revisiting the clinic within 18 months of the first visit and the second visit were very high for the females and were more than 50 percent for the males. In general, the

probability of a third visit, given a second visit, was greater than the probability of a second visit. This relationship was stronger for males than females; given the high probabilities of second visits for females, this was not surprising.

The females in this study were, in general, more likely to have a first or second clinic revisit than were the females in the study by Shea and co-authors (7). The two populations and the two studies differ considerably, the major difference being the school-linked nature of our project. School-linked programs appear to have an advantage in continuation, but there is no way to test the importance of this factor in the continuation rates we observed.

Some factors appear, on the basis of these data, to be important in clinic continuation in a school-linked program. In general, receiving a method that requires a medical provider increased the likelihood that a young woman would have more contact with the clinic. Whether that contact was due to satisfaction, and hence continuation, or dissatisfaction, and hence discontinuation, of the method remains to be explored. Shea and co-authors (7) suggested that very frequent and very infrequent clinic visits were associated with poor contraceptive use in their sample. For the senior females, being sexually active before the enrollment visit and visiting any family planning clinic before enrollment, and for the junior females, being older, increased clinic continuation as defined in this analysis.

These factors suggest that clinic continuation is related to experience and maturing. Providers need to focus on other factors to improve continuation among those with little sexual and family planning experience. The implications of clinic continuation, especially with respect to contraceptive continuation and the risk of unplanned pregnancy, need to be sorted out in the future.

This analysis suggests that the school-linked clinic we have described may offer advantages that help to reach sexually active teens, male and female alike, in search of contraceptive protection. Providers can discuss services with a "captive" audience whom they can offer continuity of care at the school and the clinic. Some evidence from this analysis suggests that this model led to higher continuation rates than previously reported models. Further research using these data will explore other outcomes among those who attended the clinic in order to augment these results and help to determine if the potential of school-based or school-linked clinics can be fulfilled.

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